

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A method of generating embroidery data from image data, comprising:

identifying an object from the image data, wherein the object corresponds to a contiguous portion of an image defined by the image data, and wherein the object defines an area to be embroidered and an area distinct from the object and entirely surrounded by an inside edge of the object;

automatically identifying a singular region from a plurality of regions associated with the image data within the object;

generating occluded boundary information associated with the singular region, wherein the occluded boundary information represents a merging of at least two regular regions of the plurality of regions and associated with the singular region object into a single continuous area to be embroidered; and

generating the embroidery data based on the occluded boundary information.

2. (original) A method as defined in claim 1, wherein the singular region is identified as being associated with at least one of a convergence and a termination of at least one of the plurality of regions.

3. (original) A method as defined in claim 1, wherein the singular region is identified as being associated with a convergence of edges associated with the image data.

4. (original) A method as defined in claim 1, wherein automatically identifying the singular region includes analyzing skeletal data.

5. (original) A method as defined in claim 4, wherein the skeletal data is generated using a distance transform algorithm that processes edge contour data.

6. (original) A method as defined in claim 1, wherein the image data is associated with a scanned image.

7. (original) A method as defined in claim 1, wherein the image data includes a bitmap.

8. (currently amended) A system for generating embroidery data from image data, comprising:

a memory; and

a processor coupled to the memory and programmed to:

identify an object from the image data, wherein the object corresponds to a contiguous portion of an image defined by the image data, and wherein the object defines an area to be embroidered and an area distinct from the object and entirely surrounded by an inside edge of the object;

identify a singular region from a plurality of regions associated with the image data within the object;

generate occluded boundary information associated with the singular region, wherein the occluded boundary information represents a merging of at least two regular regions of the plurality of regions and associated with the singular regionobject into single continuous area to be embroidered; and

generate the embroidery data based on the occluded boundary information.

9. (original) A system as defined in claim 8, wherein the singular region is identified as being associated with at least one of a convergence and a termination of at least one of the plurality of regions.

10. (original) A system as defined in claim 8, wherein the singular region is identified as being associated with a convergence of edges associated with the image data.

11. (original) A system as defined in claim 8, wherein the processor is programmed to identify the singular region by analyzing skeletal data.

12. (original) A system as defined in claim 11, wherein the skeletal data is generated using a distance transform algorithm that processes edge contour data.

13. (original) A system as defined in claim 8, wherein the image data is associated with a scanned image.

14. (original) A system as defined in claim 8, wherein the image data includes a bitmap.

15. (currently amended) A machine readable medium having instructions stored thereon that, when executed, cause a machine to:

identify an object from the image data, wherein the object corresponds to a contiguous portion of an image defined by the image data, and wherein the object defines an area to be embroidered and an area distinct from the object and entirely surrounded by an inside edge of the object;

identify a singular region from a plurality of regions associated with image data within the object;

generate occluded boundary information associated with the singular region, wherein the occluded boundary information represents a merging of at least two regular regions of the plurality of regions and associated with the singular

- ~~region~~object into a single continuous area to be embroidered; and generate the embroidery data based on the occluded boundary information.
16. (original) A machine readable medium as defined in claim 15, wherein the singular region is identified as being associated with at least one of a convergence and a termination of at least one of the plurality of regions.
17. (original) A machine readable medium as defined in claim 15, wherein the singular region is identified as being associated with a convergence of edges associated with the image data.
18. (original) A machine readable medium as defined in claim 15 having instructions stored thereon that, when executed, cause the machine to identify the singular region by analyzing skeletal data.
19. (original) A machine readable medium as defined in claim 18, wherein the skeletal data is generated using a distance transform algorithm that processes edge contour data.
20. (original) A machine readable medium as defined in claim 15, wherein the image data is associated with a scanned image.
21. (original) A machine readable medium as defined in claim 15, wherein the image data includes a bitmap.
22. (previously presented) A method as defined in claim 1, wherein generating the embroidery data based on the occluded boundary information comprises generating the embroidery data based on energy minimization information.
23. (previously presented) A system as defined in claim 8, wherein the processor is programmed to generate the embroidery data based on the occluded boundary information using energy minimization information.

24. (previously presented) A machine readable medium as defined in claim 15, wherein the instructions, when executed, cause the machine to generate the embroidery data based on the occluded boundary information using energy minimization information.
25. (new) A method as defined in claim 1, wherein the area distinct from the object corresponds to an area to not be embroidered.
26. (new) A method as defined in claim 1, further comprising automatically identifying one or more edges of the object based on the image data.
27. (new) A system as defined in claim 8, wherein the area distinct from the object corresponds to an area to not be embroidered.
28. (new) A system as defined in claim 8, wherein the processor is further programmed to identify one or more edges of the object based on the image data.
29. (new) A machine readable medium as defined in claim 15, wherein the area distinct from the object corresponds to an area to not be embroidered.
30. (new) A machine readable medium as defined in claim 15, wherein the instructions, when executed, cause the machine to identify one or more edges of the object based on the image data.